



Program Highlights

Benefits/Cost Savings

- \$6,200 cost savings in the construction phase
- \$195,100 cost savings for combined demolition and construction phases
- 54% recycling rate for construction phase
- 93% recycling rate for combined demolition and construction phases
- 1,260 total tons recycled

Materials Recycled

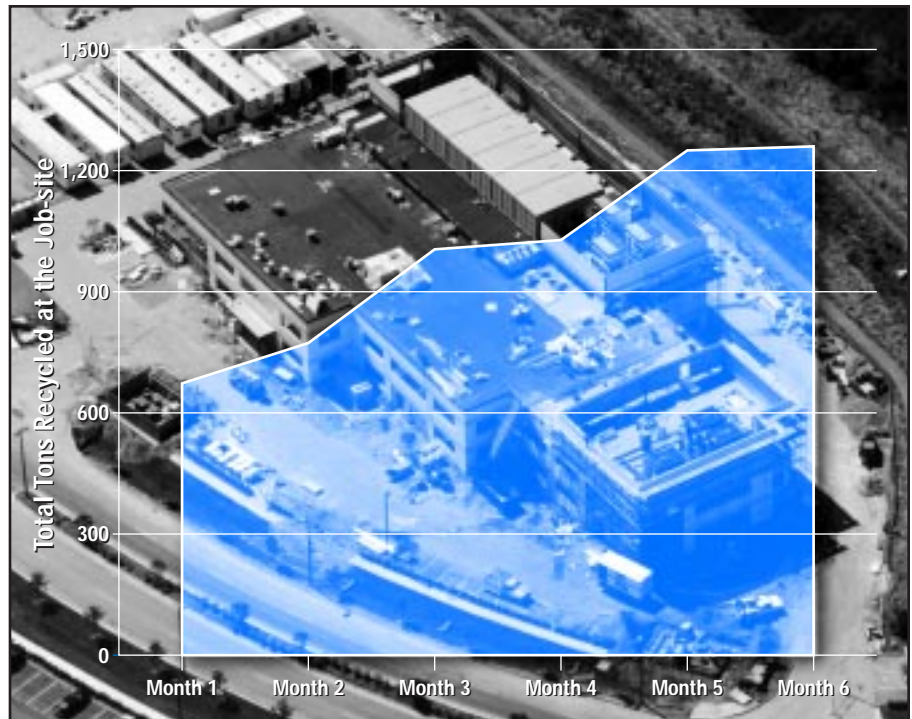
- 55 tons of wood
- 1,205 tons of concrete
- Metals (not counted in total tons recycled)

Project Statistics

- Size: 31,000 square foot remodel and 19,000 square foot addition
- Location: Bothell, WA

General Contractor

H.S. Wright Construction
PO Box 3764
Seattle, WA 98124
(206) 447-7654



H.S. Wright recycled 1,260 tons of material during the incredibly short six-month remodel at Microsoft's Redmond campus. Materials recycled included: demolition concrete, wood, copper cable and miscellaneous metals.

Recycling in the Fast Track

Project Description

Scheduling is crucial for fast-track commercial projects. The Microsoft Data Center was no exception. H.S. Wright worked round the clock to remodel an existing 31,000 sq. ft. building, add a 19,000 sq. ft. mezzanine, build-out 6,000 sq. ft. of offices, restructure 10,000 sq. ft. of roof area, and install several tons of complex mechanical and electrical systems; all within six months. Yet, they recycled over half of their construction waste, nine tons out of ten if you include demolition waste. How were they able to do it?

Recycling in Phases

Like many projects, there were distinct phases that generated only one kind of material. It could all be collected into the same recycling dumpsters, without spending time to separate it. For instance, the first phase was the demolition of over 11,000 cubic yards of existing concrete slab floor to make room for miles of

"It was a real challenge to incorporate recycling into a very, very aggressive construction schedule. Recycling is the last thing on your mind when you're under the gun.

But when we broke down the project into chunks, we realized, 'Hey, we can do this!' "

—Madalyn Rustagi,
HS Wright Project Engineer

underground conduit. R.W. Rhine, demolition sub, simply dumped all the material into concrete recycling dumpsters.

Recycling Services

Wood Waste: During the construction phase, crews collected wood waste in a designated area. According to project superintendent Jim Dale, throwing material in piles instead of dumpsters shaved off a little time from the clean-up process. H.S. Wright then used a recycling service, Doherty's Construction Waste Management, to sort through the pile and haul the wood away. Because Doherty's workers packed their trucks "like a jig saw puzzle" to fit as much of the bulky wood as possible into each haul, it was actually faster for them to pull the wood from a pile than dumpsters. H.S. Wright saved over \$6,000 by recycling wood waste alone.

Preventing Cardboard Waste

Perhaps the best way to deal with job-site waste is not bring it to the site at all. Electrical subs, Cochran Electric, requested their suppliers not wrap things individually in cardboard. Instead, items like lighting units were simply shipped to the site on a pallet. When asked about breakage, Cochran's Todd Bergsma replied, "It was no worse than usual. I think when things aren't all wrapped up in cardboard, workers are more careful because they can tell what they are." Cochran also removed and recycled cardboard packaging from the large mechanical units before they were moved to the site.

Quick But Not Dirty

The results were impressive. Without slowing down their schedule, H.S. Wright managed to recycle 1,260 tons of construction and demolition waste. Though they went about the job thoughtfully, they didn't take extraordinary measures. Recycling and reducing waste does not have to slow down a fast track job.

King County Offers Free Technical Assistance to Construction, Demolition and Landclearing Contractors

- Assistance developing comprehensive job-site waste management plans
- *Construction/Recycling Directory* - a listing of area recyclers
- *Contractors' Guide to Preventing Waste and Recycling* - a how-to guide
- Case studies highlighting successful job-site programs
- *WasteSpec** - a manual of model specifications for construction waste reduction, reuse and recycling. This manual provides architects and engineers model specification language for job-site recycling.
- Examples of contract language specifying recycling and waste management requirements from job-sites throughout King County
- Green Works/Construction Works public recognition program

* Developed by Triangle J Council of Governments; cost \$25.00

**Call the King County Solid Waste Division
at (206) 296-8480 for assistance.**

For more information:

King County

*King County Construction
Recycling Directory*
and other technical assistance:
Theresa Koppang,
*King County
Solid Waste Division*
(206) 296-8480

City of Seattle

*Business and Industry
Recycling Venture*
(206) 389-7304

General Contractor

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Case Study Consultants

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